UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/364,070	07/30/1999	AKIHIRO SUZUKI	3327.2062-01	8907

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EXAMINER
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ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 04/23/2004   2/

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/364,070	SUZUKI ET AL.
	Examiner	Art Unit
	King Y. Poon	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2004*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 15-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-6* is/are allowed.

6)☒ Claim(s) *15-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 July 1999* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. <u>08/544,076</u>.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

2/17/2004 has been entered.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

3.   Claim 15 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor(s), at the time the application was filed, had

possession of the claimed invention.

4.   The limitation of "wherein the status recovered by the recovery means is the

status previous to the status at the time of the failure" is subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in

the relevant art that the inventor(s), at the time the application was filed, had possession

of the claimed invention.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Bain

(US 5,287,434).

Regarding claim 21: Bain et al teaches a job scheduling device (PC 14, column

3, lines 50-55) comprising: a queue, (fig. 4, column 8, lines 35-40) that stores print jobs

(job, fig. 2, J1, J2, ..., fig. 1) which include print data and attribute information (column 8,

lines 35-40, column 6, lines 55-69) relating to a print job output result (e.g., the print job

is being printed ahead of other jobs would resulted in a faster outputted print job);

scheduling means (the routine of the processor 19 that schedule print job according to

the type of printer and priority, column 8, lines 25-35) for scheduling the print jobs stored

in the queues; and attribute modifying means (routine block 78, column 8, lines 1-8) for

modifying the attribute information (priority, column 8, line 2) of the print job stored in the

queue when an instruction (change request message, column 8, lines 1-8) for modifying

the attribute information (priority, column 8, line 2) of the print job is received.

Regarding claim 22: Bain teaches wherein the attribute modifying means modifies the attribute information of the print job when the attribute information of the print job can be modified (inherent properties of modifying; it is impossible (can not) to modify something when the something is impossible to be modified. I.e., the something can be modified only when the something can be modified).

. Regarding claim 23: Bain teaches wherein the attribute modifying means modifies the attribute information of the print job when the instruction is free from errors (instruction is free from error is being interpreted as the microprocessor would recognize the change request message as a change request message. Errors in the change request message means the microprocessor would not recognize the change request message. The microprocessor change the attribute in response to a change request message/instruction, column 8, lines 1-10. Therefore, the microprocessor would change attribute only when the instruction is free from error).

Regarding claim 24: Bain teaches wherein the attribute modifying means determines whether the attribute information of the print job can be modified based on the status of the print job (column 8, lines 1-10, based on whether the print job is being distributed to a printer).

Regarding claim 25: Bain teaches wherein the attribute modifying means determines that the instruction has an error (78, fig. 2, column 8, lines 1-10, the attribute modifying means must determines if the instruction can be processed; the examiner interprets that the event that the instruction can not be processed, e.g., the job is being distributed to a printer, is an error) when the instruction includes an attribute that is not

supported by the job scheduling device (the change of priority of a print job is not being

supported during the time the print job is being distributed to a printer, column 8, lines 1-

10).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bain et al. (US 5,287,434) in view of Lobiondo (US 5,287,194)

Regarding claim 15: Bain teaches a job scheduling device (PC 14, column 3,

lines 50-55) which sequentially stores jobs, (job, fig. 4, J1, J2..., fig. 1) for which

processing requests (the request of user of how to process print job, column 4, lines 35-

46) were received, in a queue (column 8, lines 35-40) and sequentially processes the

jobs (search for the highest priority job to be printed, column 10, lines 40-46, i.e.,

process the job in the sequence from highest priority to lowest priority) held in the queue

using a job execution section, (the routine of processor that distribute a print job to a

printer, column 11, lines 58-63), the job scheduling device comprising: a plurality of

queues (Q1-Qn, fig. 1) provided corresponding to a status (the job to be printed by a

certain type of printer, column 8, lines 25-35) of a sequential job process (queue,

inherently processes jobs sequentially/in order); and scheduling means (the routine of

the processor 19 that schedules print job, using queues, according to the type of printer

and priority, column 8, lines 25-35) for scheduling the jobs using the plurality of queues;

and recovery means (the routine of the processor that restarts job such that each job

continues on the same printer, column 15, lines 20-25, column 17, lines 25-35) for

recovering the status (state, column 15, lines 20-25) of each of the jobs (column 15,

lines 20-25) being held in the plurality of queues, at the time of recovery from a failure,

(recover from the failure to start the spooler due to termination, column 15, lines 12-25)

if any failure occurred while the jobs are being scheduled by the scheduling means, (the

processor is processing (scheduling) jobs on printers, column 14, lines 62-68, column

15, lines 1-12, when termination of spooler occurs) wherein the status recovered by the

recovery means is the status previous to the status (column 15,lines 1-20, teaches to

change the processing state of the print job at the time of failure to a wait state. A wait

state is a state previous to a processing state because it is waiting to be processed) at

the time of failure.

Bain does not teach receiving processing request from terminals.

Lobiondo, in the same area of using a job scheduler device (column 3, lines 40-

45) for scheduling print jobs, to be printed by printers, (column 4, lines 45-50), using

printer queue (430, fig. 4), teaches the job scheduler device (scheduler 50, column 3,

line 41) would receive and schedule print job processing request (criteria of print job,

column 3, lines 35-50) from different terminals. (Workstation 30, column 3, lines 25-35)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain's job scheduling device to receive print job processing request from different terminals.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Bain's job scheduling device by the teaching of Lobiondo because of the following reasons: (a) it would have allowed a user at any local area within the network of the scheduling device and the different terminals to control printing of a job, as taught by Lobiondo, at column 2, lines 32-35; and (b) it would have allowed the job scheduling device to schedule print jobs for different users at different locations (terminals) and increased the usage of the system.

Note: Bain teaches that the processor is controlled by software routine, column 3, lines 5-35, and lines 55-56. It is inherent that different functions carried out by a processor are controlled by different software codes or routines when a processor is run by software.

Regarding claims 16, 18: Bain et al teaches a job scheduling device (PC 14, column 3, lines 50-55) for storing, in a queue, (fig. 4, column 8, lines 35-40) print jobs (job, fig. 2, J1, J2, ..., fig. 1) which include print data and attribute information (column 8, lines 35-40, column 6, lines 55-69) and for which processing requests (the request of user of how to process print job, column 4, lines 34-46) were received and for sequentially printing the print jobs held in the queue (search for the highest priority job to be printed, column 10, lines 40-46, i.e., print job in the sequence from highest priority to lowest priority) based on the attribute information (job's priority, column 10, lines 40-

45) using a job execution section, (the routine of processor that distribute a print job to a

printer, column 11, lines 58-63) the job scheduling device comprising: a plurality of

queues (Q1-Qn, fig. 1) provided corresponding to states of the jobs; (the job to be

printed by a certain type of printer, column 8, lines 25-35), and scheduling means (the

routine of the processor 19 that schedule print job according to the type of printer and

priority, column 8, lines 25-35) for scheduling the jobs using the plurality of queues; and

attribute modifying means (routine block 78, column 8, lines 1-8) for modifying the

attribute information (priority, column 8, line 2) only when a print job can be changed at

the time that an instruction (change request message, column 8, lines 1-8) for modifying

the attribute information (priority, column 8, line 2) of the print job is received, and when

the instruction is free from errors (instruction is free from error is being interpreted as

the microprocessor would recognize the change request message as a change request

message. Errors in the change request message means the microprocessor would not

recognize the change request message. The microprocessor change the attribute in

response to a change request message/instruction, column 8, lines 1-10. Therefore,

the microprocessor would change attribute only when the instruction is free from error).

Bain does not teach receiving processing request from terminals.

Lobiondo, in the same area of using a job scheduler device (column 3, lines 40-

45) for scheduling print jobs, to be printed by printers, (column 4, lines 45-50), using

printer queue (430, fig. 4), teaches the job scheduler device (scheduler 50, column 3,

line 41) would receive and schedule print job processing request (criteria of print job,

column 3, lines 35-50) from different terminals. (Workstation 30, column 3, lines 25-35)

Therefore, it would have been obvious to a person with ordinary skill in the art at

the time the invention was made to have modified Bain's job scheduling device to

receive print job processing request from different terminals.

It would have been obvious to a person with ordinary skill in the art at the time

the invention was made to have modified Bain's job scheduling device by the teaching

of Lobiondo because of the following reasons: (a) it would have allowed a user at any

local area within the network of the scheduling device and the different terminals to

control printing of a job, as taught by Lobiondo, at column 2, lines 32-35; and (b) it

would have allowed the job scheduling device to schedule print jobs for different users

at different locations (terminals) and increased the usage of the system.

Note: Bain teaches the processor is controlled by software routine, column 3,

lines 5-35, and lines 55-56. It is inherent that different functions carried out by a

processor are controlled by different software codes or routines when a processor is run

by software.

Regarding claim 17: Bain teaches wherein the attribute modifying means

modifies the attribute information of the print job when the attribute information of the

print job can be modified (inherent properties of modifying; it is impossible/can to

modify something when the something is impossible to be modified. I.e., the something

can be modified only when the something can be modified).

Regarding claim 19: Bain teaches wherein the attribute modifying means

determines whether the attribute information of the print job can be modified based on

the queue in which the print job is stored (column 8, lines 1-10, based on whether the queue is in the process of distributing the print job to a printer).

Regarding claim 20: Bain teaches wherein the attribute modifying means determines that the instruction has an error (78, fig. 2, column 8, lines 1-10, the attribute modifying means must determines if the instruction can be processed; the examiner interprets that the event that the instruction can not be processed, e.g., the job is being distributed to a printer, is an error) when the instruction includes an attribute that is not supported by the job scheduling device (the change of priority of a print job is not being supported during the time the print job is being distributed to a printer, column 8, lines 1-10).

Allowable Subject Matter

9.   Claims 1-6 are allowed.

Response to Arguments

10.   Applicant's arguments filed 6/12/20032/17/2004 have been fully considered but they are not persuasive.

With respect to applicant's argument, on page 12, that according to Bain, the state of the job restarted is the same as the state of the job at the time of the termination of the job, has been considered.

In reply: Column 15, lines 1-20, Bain, teaches to change the processing status of the print job at the time of failure to a waiting status. A waiting status is a state previous to a processing state because it is waiting to be processed.

With respect to applicant's argument, on page 13, that priority is not attribute information, has been considered.

In reply: Page 14, lines 17-25, specification of the application gives an example of what is being considered as print attribute. The example comprises: paper size, a tray number, and the availability of double side printing. Paper 13, lines 7-11, of the amendment filed on 2/17/2004, also admitted that the attribute given in page 14, lines 17-25 is only an example of attribute information of a print job. Therefore, the applicant admits that the print attribute is more than paper size, a tray number, and the availability of double side printing.

Moreover, paper size is referring to the size of paper that the print job is to be printed. A paper tray number is not something related to printing itself, but is used to determining where the print job is to be send after printing. If how the print job is to be sent after printing would be considered a print attribute, the time that the print job is to be printed would also be considered as a print attribute.

In general, print attribute is information related to the print job. For example, a user would set the print job to be printed onto a A4 size paper, or to be printed first. Both, the print job paper size and the priority are directly related to how the print job is to be printed. Therefore, priority of a print job is print attribute.

Lobiondo, (US 5,287,194) column 4, lines 50-55, column 6, lines 22-25,

disclosed that it is well-known in the art that the print attribute (information related to a

print job/criteria) includes paper type and a time constraint. Column 4, lines 65-69,

column 5, lines 5-10, Lobiondo, teaches that the time constraint is indicating whether

the job is urgent or not (high priority or not).

Conclusion

11.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to King Y. Poon whose telephone number is (703) 305-

0892

April 19, 2004